

University of North Georgia  
College of Science and Mathematics  
Department of Physics  
PHYS 1111 - Introductory Physics I - Fall 2018

“The noblest pleasure is the joy of understanding.” -Leonardo da Vinci

**General Information**

Instructor: Dr. Nathan Harrison

Office: No idea

Email: Standard UNG email address

Office Hours: See the pdf file of my schedule.

**Required Materials**

Textbook: College Physics 11th Edition w/ Webassign by Serway

Scientific or graphing calculator, ruler, protractor, paper

GitHub account

SageMath (Cloud account or your own installation)

Java JDK 1.8 or greater

**Course Description**

This is an introductory course which will include material from mechanics, thermodynamics, and waves; and is the first course in a two-semester Physics sequence. Elementary algebra and trigonometry will be used. The prerequisite is MATH 1113 or MATH 1450. The lecture is three credits while the lab is one credit. (see the lab syllabus for more details)

**Course Content**

We will be covering Parts 1-3 (Mechanics, Thermodynamics, and Vibrations and Waves) of the textbook which consists of 14 chapters. We will cover approximately 2-3 chapters per week and one corresponding lab per chapter (see the lab syllabus for more details). A detailed schedule can be found at the end of this syllabus.

**Expected Course Outcomes**

The objective of the course is to have the student learn and be proficient in the application of the basic laws of mechanics, thermodynamics, and waves. After having taken this course, the student should be able to:

1. interpret physical situations as stated in word problems
2. be able to identify the physical laws appropriate to the physical situation at hand
3. be able to use mathematics/physical law as a tool for predicting behavior of systems
4. be able to use computers/sensors as a tool for experimental investigation of physical law
5. be able to represent physical systems in multiple representations, e.g. mathematically, pictorially, graphically, etc.

6. be able to use various technologies as tools for scientific endeavor

### **Means of Assessment and Grading Scheme**

There will be several exams during the semester as well as several short quizzes. Exams will be announced at least one week in advance, quizzes may occasionally be unannounced. You will be provided with a “clicker” for answering in-class polls and practice problems; clicker questions will count as part of your participation grade. Homework assignments will be given on a fairly regular basis via WebAssign. The final exam is comprehensive and mandatory.

Average of quizzes and exams: 50%

WebAssign HW: 25%

Participation: 25%

### **Supplemental Syllabus**

Please see <https://ung.edu/academic-affairs/policies-and-guidelines/supplemental-syllabus.php> for the following information:

1. Academic Exchange
2. Academic Integrity Policy
3. Academic Success Plan Program
4. Class Evaluations
5. Course Grades and Withdrawal Process
6. Disruptive Behavior Policy
7. Inclement Weather
8. Smoking Policy
9. Students with Disabilities

### **Additional Information**

1. You will have to self-register with WebAssign in order to access the online homework. A “class key” is need to do this, it will be emailed to you during the first week of classes.
2. This syllabus may be adjusted if deemed necessary by the instructor.

**Schedule (approximate)**

\* See the university schedule for important dates such as drop deadlines, etc.

Week	Date	Topics/Reading
1	8/20	ch. 1
2	8/27	ch. 2
3	9/3	ch. 3
4	9/10	ch. 4
5	9/17	Review, Exam 1
6	9/24	ch. 5
7	10/1	ch. 6
8	10/8	ch. 7
9	10/15	ch. 8
10	10/22	Review, Exam 2
11	10/29	ch. 9
12	11/5	ch. 10
13	11/12	ch. 11
Fall Break	11/19	
14	11/26	parts of ch. 12-14
15	12/3	Review, Exam 3
Finals	12/10	Lecture & lab final, both cumulative